



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/509,493 05/15/00 OKINO

N 058562

IM52/1011

SUGHRUE MION ZINN
MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON DC 20037

EXAMINER

KILKENNY, T

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 10/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/509,493

Applicant(s)

OKINO ET AL.

Examiner

Todd J. Kilkenny

Art Unit

1733

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7&9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 4, 5, 6, 7, 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishikawa.

In Japanese publication 59-85729, Ichikawa et al teaches a plunger preplasticizing injection molding machine, wherein a resin plasticizing process is disclosed. Referring to Figures 1 and 2, Ichikawa teaches an injection machine (unlabeled) upstream a die having a nozzle end (5). Resinous material is fed to the injection machine via a hopper wherein an extruding screw carries the molten resin to a spaces C and D of a plunger barrel (1). Plunger (13) injects the resin material toward the die (5) wherein it is extruded (See English Abstract).

4. Claims 10 – 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Biffar.

In Germany publication DE 3843342, Biffar teaches a device for discharging plastic into the mould of a press, wherein a method for discharging plastic resin is disclosed. Referring to Figure 1, Biffar teaches an extruder or plasticator (2) ("injection machine) upstream a mouthpiece (25) ("die"), wherein the mouthpiece (25) includes a nozzle like tip (26). Thermoplastic is fed to the extruder via hopper (41) where it is transferred to a plunger chamber (16) by what appears to be a screw. The resin is injected to the mouthpiece (25) and out of nozzle end (26) by two plungers (4 & 5).

As to claims 12 and 13, Biffar teaches an adjusting device (33) that acts to open or close the mouthpiece (25). Biffar's adjusting device is recognized as applicant's claimed flow controller as it acts to control the injection amount of resin through the nozzle end (26).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Todaka et al in view of Biffar or Ichikawa.

In U.S. patent 5,807,588, Todaka et al teach a controllable extrusion molding apparatus wherein a method for preparing a panel with a resinous frame is disclosed. Referring to Figure 1, the extrusion molding apparatus of Todaka et al includes an

Art Unit: 1733

extruding molding machine (15), which is loaded with an extrusion material via hopper (16). Downstream said molding machine (15) is a nozzle fore end (4) which discharges the extrusion material onto a panel (14) with a certain cross sectional shape.

Furthermore, Todako et al teach controlling the injection amount of material in response to a relative moving speed of the panel (14) and nozzle fore end (4). Specifically, Todakao et al teach decreasing the peripheral speed of the panel (14) when changing from the rectilinear portion of the panel (i.e. the edge) to the corner portions, and at the same time, controlling the working speed of the extrusion molding machine actuator so that "the discharged amount of an extrusion material is relatively changed to follow up changes in the peripheral speed" of the panel (Column 2, lines 6 – 14; Column 7, lines 52). Todaka appears not to teach the specifics of the extrusion molding apparatus to include a plunger chamber that accepts the extrusion material from an extruding screw and feeding the extrusion material to the nozzle fore end (4) from the plunger chamber by a plunger. However, extrusion molding apparatus containing extruding screws and plungers upstream discharging dies are known as taught for by Ichikawa et al or Biffar et al as described in paragraphs 3 and 4, above.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have the extrusion molding apparatus of Todaka et al include a metering screw and plunger as taught by Ichikawa et al or Biffer since 1) Todaka et al teach using an extrusion molding apparatus whose actuators working speed can be controlled, 2) extrusion molding apparatuses having plungers to provide the extrusion material to the die are well known to be controllable and 3) since Ichikawa et al teaches that an

Art Unit: 1733

extrusion apparatus having an metering screw and plunger enables the back pressure of the screw to be more freely adjustable or since Biffar teaches that an extrusion apparatus having a metering screw and plunger provides a simple way to discharge plastic without major temperature loss.

8. Claims 18 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Todaka et al in view of Ichikawa et al or Biffar and further in view of Cornils et al.

Todaka et al in view of Ichikawa et al or Biffar teach a method for preparing a panel with a resinous frame including an extrusion molding apparatus having a metering screw and plunger, which is controllable to discharge the extrusion material onto the panel by changing the speed of the plunger to correspond to the changing speed of the panel (i.e perpherial edges to corners) as described in paragraph 6, above. The combined teaching of Todaka et al in view of Ichikawa et al or Biffar fails to teach a pressing member which moves in connection with the movement of the panel and presses to unify the extruded material to the edge of the panel. However, extrusion heads including pressing members are well known in the extrusion art as taught for example by Cornils et al.

In U.S. patent 5,645,785, Cornils et al teaches an extrusion head having a sealing ledge, which is movable between a retracted position to an engaged position to pressure seal the extruded material in the form of a frame onto the edges of a panel in a more secure manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a movable sealing ledge as taught by Cornils et al on

Art Unit: 1733

the nozzle fore of the extruding apparatus of Tokado so as to be able to press the extrusion material against the panel edge to unite in a more secure seal. As to the pressing member being movable along the edge of the moving panel, it is known to have movable extrusion heads/nozzles as taught by Biffar so as to better control the placement of the extrusion material. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the nozzle fore of Todaka et al having a retractable and engagable press applying sealing ledge as taught by Cornils et al be moveable in relation to the edge of the panel so as to better control the placement of the extrusion material onto the panel edge as taught by Biffar which therefore would render the sealing ledge (pressing member) movable along the edge of the panel.

As to claims 19 – 21, Tokana teaches to control the flow of the extrusion material in relation to the changing speed of the panel as discussed in paragraph 6, above.

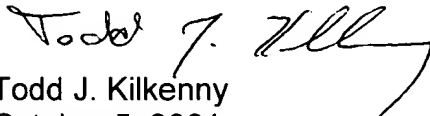
Conclusion

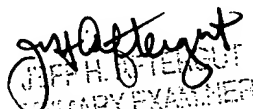
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Art Unit: 1733

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Todd J. Kilkenny
October 5, 2001


JEFF H. PETERS
PRIMARY EXAMINER
GROUP 1200